George Mason University
Department of Mathematical Sciences
Number Theory
Fall 2017

Course: MATH-301, section 001.

Total Credits: 3.

Purpose: An introduction to the theory and properties of the whole numbers. Presentation of classical proofs, appealing results and practical aspects, including prime numbers, factorization and Diophantine equations.

Prerequisites: Six hours of math at GMU. Two 3-credit math courses at GMU is sufficient. For precise information goto: `catalog.gmu.edu/` And type "math 301" in the "Search the 2017-2018 Catalog". Hit "Search" to get the course description.

Times and Places: MW 3:00 pm – 4:15 pm Robinson Hall B118 (R B118).

Period: From August 28. to December 20.

Dates to keep in mind:

September 5:   Last day to drop with no tuition liability.
September 5:   Last day to add classes.
September 29:   Last day to drop with no academic liability.

Professor:
   Geir Agnarsson
   Exploratory Hall 4412
   Phone number: (703) - 993 - 1477
   email: `geir@math.gmu.edu`

Office-hours: MW 11:00 am – 12:00 noon, or by appointment.

Required Text: Kenneth H. Rosen, *Elementary Number Theory, and its applications.* Pearson, Addison Wesley, (2011), 6th edition.

Material: Chapters: 1, 3, 4, 6, 7, 9, 11, 13?

Homework: HW will be assigned every week on Wednesdays, starting Wednesday August 30. They are to be handed in the following Monday, in the beginning of the class by 3:00 pm. Together with the homework problems, there will be a collection of additional problems to be discussed in class on Mondays, if necessary. The problems to be handed in for grading will be labeled *homework*, and the additional exercises will be labeled as *other*.

WebSite: All handouts for this class will be posted as pdf-files on the class-WebSite: `http://math.gmu.edu/~geir/courses/301fall17/`. Please check this WebSite on a regular basis, since short announcements and additional info might be posted there as well.

Examinations: There will be one midterm exam and a final exam. The midterm will cover the material up to that point in lecture, it will be 50 minutes long and take place in the class room. The final will be a two hour cumulative exam also in the class room.

Midterm: Wednesday, October 25., 3:25 pm - 4:15 pm, R B118.

Final: Monday, December 18., 1:30 pm - 3:30 pm, R B118.

Grading: The biggest number of the following:

    1: HW 30% + MT 30% + FL 40%
    2: HW 30% + FL 70%

Policy:

- Absence from an exam, without proper explanation, is an automatic zero on that exam.

- There will be no make-up midterm exam.

- In order to pass the class one MUST TAKE THE FINAL!

Collaboration: Needless to say, collaboration of any kind during an exam (quiz, midterm or final) is cheating. You are to abide by the GMU's Honor Code, see `oai.gmu.edu/mason-honor-code/`

During an exam you are not allowed to help anyone nor receive any help from anyone, except possibly from the exam proctor. You also cannot use any helping device, be it note books, text books, cheat-sheets or programmable calculators, unless otherwise clearly stated on the exam.

HOWEVER, healthy discussion about the homework problems among your classmates is allowed and encouraged! Be sure though, to write your own solutions.

Courtesy: Be courteous to your fellow classmate. During lectures be quiet and please turn off your cellular phones!

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Geir Agnarsson
August 28, 2017

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